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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/018,686

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Seiji Onishi

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/018,686

Applicant(s)

ONISHI ET AL.

Examiner

Michael V. Battaglia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 5-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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The indicated allowability of claims 1 and 5-11 is withdrawn in view of the newly discovered reference(s) to Uchiyama et al (hereafter Uchiyama) (US 6,163,409). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5, 7, 10, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchiyama.

In regard to claim 1, Uchiyama discloses a first light source (Figs. 1 and 2D, element 21) for emitting a first light beam with an arbitrary wavelength (Col. 6, lines 64-67); a second light source (Figs. 1 and 2C, element 11) for emitting a second light beam with a wavelength different from that of the first light source (Col. 6, lines 61-67); a synthesizing unit (Fig. 1, element 13-1) operable to make an optical axis of the first light beam emitted from the first light source coincide with an optical axis of the second light beam emitted from the second light source (Col. 7, lines 49-53); a conversion unit (Fig. 1, element 14) operable to convert a light beam outputted from the synthesizing unit into substantially parallel light; a converging unit (Fig. 1, element 16) operable to convert a light beam outputted from the conversion unit onto an optical disk (Fig. 1, "Optical Disk"); a light path length conversion unit (Fig. 1, element 15) operable to lengthen light path

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length of a light, the light path length conversion unit being provided between the synthesizing unit and the converging unit (Note that the synthesizing unit and conversion unit are made close to each other while the light path length is lengthened (See Pythagorean Theorem)); and a detecting unit (Fig. 1, elements 17 and 27) operable to receive the light beam reflected on the optical disk, wherein when a back focus (Fig. 2D, element A) of the conversion unit for the wavelength of the first light source is f_1 and a back focus (Fig. 2C, element A) of the converting means for the wavelength of the second light source is f_2 , the first light source is located at a position closer to the conversion unit than a position located apart from the conversion unit by f_1 (Fig. 2D), and the second light source is located at a position farther from the conversion unit than a position located apart from the conversion unit by f_2 (Fig. 2C).

In regard to claim 5, Uchiyama discloses that the light path length conversion unit is made of a material having a refractive index capable of lengthening light path length (inherent that a light path length conversion unit that lengthens light path length has a refractive index capable of lengthening light path length).

In regard to claim 7, Uchiyama discloses that an aperture diaphragm (Fig. 1, element 19) adapted to move with the converging unit and operable to converge a light beam spot of desired size onto the optical disk (Col. 7, lines 35-45).

In regard to claim 10, Uchiyama discloses that when the wavelength of the first light beam emitted from the first light source is made λ_1 , and the wavelength of the second light beam emitted from the second light source is made λ_2 , $760 \leq \lambda_1 \leq 810$ nm, $620 \leq \lambda_2 \leq 680$ nm (Col. 14, lines 56-67).

In regard to claim 11, Uchiyama discloses that the first and second light beams as divergent lights emitted from the first and second light sources are incident on the synthesizing unit, thereby scattering a light reflected on a surface of the synthesizing unit (Fig. 3).

Claim Rejections - 35 USC §§ 102, 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 8 and 9 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Uchiyama.

In regard to claim 9, Uchiyama discloses that when numerical aperture on the side of the optical disk corresponding to the combination of the first light source and the optical disk is made NA1, and numerical aperture on the side of the optical disk corresponding to the combination of the second and the optical disk is made NA2, the following conditional expression is satisfied: $NA1 < NA2$ (Col. 7, lines 35-42).

In regard to claims 6, 8 and 9, when the imaging magnification of the converging unit with respect to the first light source is made $m1$, and imaging magnification of the converging unit with respect to the second light source is made $m2$, satisfaction of the following conditional expressions flows naturally from the structure positively claimed and is therefore inherent: $1.5 \leq (m2/m1)$, $|m1| \leq 0.068$, $|m2| \leq |m1|$. In further support of inherency, the goal of both the claimed optical

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pickup and the optical pickup of Uchiyama is compatibility with both DVD's and CD's. Inherent to the accomplishment of that goal is the realization of the imaging magnifications respectively required for use with DVD's and CD's. If satisfaction of the conditional expressions is not inherent, then doing so would be obvious. The general conditions of imaging magnifications respectively required for use with DVD's and CD's are disclosed by the structure of the optical pickup of Uchiyama as evidenced by the ability of optical pickup of Uchiyama to record to and reproduce from both DVD's and CD's (Figs. 1, 2C and 2D and Col. 7, line 63-Col. 8, line 65). "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

Citation of Relevant Prior Art

3. Maruyama (US 6,791,932) discloses an optical pickup device compatible with both DVD's and CD's wherein when the imaging magnification of the converging unit with respect to the first light source (Fig. 1, element 12) is made m_1 , and imaging magnification of the converging unit with respect to the second light source (Fig. 1, element 11) is made m_2 , the following conditional expression is satisfied: $1.5 \leq (m_2/m_1)$ (Col. 9, Table 1). Saito et al (US 6,192,021) disclose an optical pickup device compatible with both DVD's and CD's wherein when the imaging magnification of the converging unit with respect to the first light source (Fig. 1, element 12) is made m_1 , and imaging magnification of the converging unit with respect to the second light source (Fig. 1, element 11) is made m_2 , the following conditional expressions are satisfied: $|m_1| \leq 0.068$, $|m_2| \leq |m_1|$ (Col. 28, Table 2).

Conclusion

4. Applicant's submission of an information disclosure statement under 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p) on June 22, 2005 prompted the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 609.04(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V. Battaglia whose telephone number is (571) 272-7568. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, A. L. Wellington can be reached on (571) 272-4483. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



BRIAN E. MILLER
PRIMARY EXAMINER